

535, 226

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number
WO 2004/045599 A1

- (51) International Patent Classification⁷: **A61K 31/28**
- (21) International Application Number:
PCT/GB2003/005061
- (22) International Filing Date:
20 November 2003 (20.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0227135.1 20 November 2002 (20.11.2002) GB
- (71) Applicants (*for all designated States except US*):
NORTHWICK PARK INSTITUTE FOR MEDICAL RESEARCH [GB/GB]; -, Harrow, Middlesex HA1 3UJ (GB). **UNIVERSITY OF SHEFFIELD** [GB/GB]; Firth Court, Western Bank, Sheffield, Yorkshire S10 2TN (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **MOTTERLINI, Roberto, Angelo** [IT/GB]; Department of Surgical Research, Northwick Park Institute for Medical Research, Watford Road, Harrow, Middlesex HA1 3UJ (GB). **MANN, Brian, Ernest** [GB/GB]; Department of Chemistry, The University of Sheffield, Brook Hill, Sheffield, Yorkshire S3 7HF (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- *with international search report*
 - *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: THERAPEUTIC DELIVERY OF CARBON MONOXIDE

(57) Abstract: Metal carbonyls are used in combination with at least one guanylate cyclase stimulant/stabilizer to deliver CO having biological activity, for example vasodilatation and inhibition of platelet aggregation. The two components may be administered simultaneously or sequentially. A particular described combination is tricarbonylchloro(glycinato)ruthenium(II) and the drug YC-1.

WO 2004/045599 A1